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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

POLTORAK, PIOTR

ART UNIT PAPER NUMBER

2134

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/852,372

Applicant(s)

GULICK ET AL.

Examiner

Peter Poltorak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-29, 31-48 and 50-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-29, 31-48 and 50-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. The Amendment, and remarks therein, received on 3/18/2005 have been entered and carefully considered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Response to Amendment

3. Applicant's arguments have been carefully considered but they were not found persuasive.
4. The relevance of most of the arguments presented by applicant is not understood and as a result is not addressed. For example on pg. 20 in regard to "mailbox" applicant discusses a battery, a monotonic counter etc. in relation to "the fundamental deficiency of Hadfiled", wherein the term: "the fundamental deficiency" is left open for guessing.
5. As per claims rejection of claims 31, 37 and 50 applicant argues that the data cited in the claims' language is directed towards specific data and as a result the examiner's rejection is moot.
6. Applicant challenges the examiner's argument (pg. 19) that a computer RAM in Windows NT Server that stores input and output data in memory banks is not a mailbox RAM. To make his point, applicant recites limitations that are not present in the claim language. Applicant refers to the specification but the relevance of the specification is not clear since it not only uses phrases such as "may be" but also

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discusses "one embodiment", which suggests that other embodiments are permissible.

7. Claims 1-10, 12-29, 31-48, 50-52 have been examined.
8. Claims 1, 11-13, 15-16, 21, 30, 32-35, 38-39 and 40-41, 44-46, 51-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Hadfield et al. (Lee Hadfield, Dave Hatter, Dave Bixler, "Windows NT Server 4 security handbook", 1997, ISBN: 078971213-x.)
9. As per claim 1 Hadfield et al. teach that a processor is configured to operate in an operating mode, wherein the operating mode is one of a plurality of operating modes including a secure operating mode and secure assets (e.g. files) that can only be accessed in the secure mode. Windows NT runs on hardware, the computers that use processors. Each user that accesses any Windows NT Server-based resources first must be validated by the system, and the user is required to enter a valid password before any interactive Windows session is allowed (pg. 45, User Accounts in a Windows NT Environment).

Computer RAM in Windows NT Server stores input and output data in memory banks (mailbox RAM), and the input data for the one or more secured assets is addressed to the RAM and the output data is retrieved from an address at the RAM.
10. Claims 21, 34, 39 and 40 are substantially equivalent to claim 1; therefore claims 21, 34, 39 and 40 are similarly rejected.

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11. As per claim 15 the limitation "scratchpad RAM, wherein each of the one or more secured assets is configured to access the scratchpad RAM for the storage of data" is taught because computers store applications and files accessed by users in (scratchpad) RAM.
12. Also, as discussed above in reference to claim 1, users don't have access to the system until the log-on sequence allows them to log-on to the system and enter the secure mode. It is inherent to have filters configured not to provide input data to RAM if the processor is not operating in the secure operating mode.
13. Upon receipt of the access request if the processor is not operating in the secure operating mode (placing an incorrect password and/or user name while attempting to access the system) will result in an error message and denial of access to the system will result in a predetermined response in lieu of data.
14. Claims 17-18, 31, 37 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hadfield et al. (Lee Hadfield, Dave Hatter, Dave Bixler, "Windows NT Server 4 security handbook", 1997, ISBN: 078971213-x) in view of Official Notice.
15. As per claims 17-18 access locks configured to disable the access filters in an unlocked mode is implicit, otherwise a user would have to log-in to the system each time the user tries to access some files.
16. Hadfield et al. do not explicitly teach the access filters being configured to provide a predetermined response in lieu of data if the processor is not operating in the secure operating mode.

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Official Notice is taken that it is old and well-known to provide a predetermined response in lieu of data upon receipt of an access request to restricted assets.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to configure the access filters to provide a predetermined response in lieu of data upon receipt of an access request to restricted assets. One of ordinary skill in the art would have been motivated to perform such a modification so that a user would be aware of the failure and take appropriate action (type password again, for example).

17. As per claims 31, 37 and 50 Hadfield et al. do not explicitly teach providing a predetermined response in lieu of data upon receipt of an access request to restricted assets.

Official Notice is taken that it is old and well-known to provide a predetermined response in lieu of data upon receipt of an access request to restricted assets.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to provide a predetermined response in lieu of data upon receipt of an access request to restricted assets. One of ordinary skill in the art would have been motivated to perform such a modification so that a user would be aware of the failure and take appropriate action (type password again, for example).

18. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hadfield et al. (Lee Hadfield, Dave Hatter, Dave Bixler, "Windows NT Server 4 security handbook", 1997, ISBN: 078971213-x) in view of Heald et al. (U.S. Patent No. 5272382).

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19. Hadfield et al. teach a system including secured assets and security hardware as discussed above.

Hadfield et al. do not teach a battery wherein the battery provides reserve power to one or more secured assets and to the security hardware.

Heald et al. teach a battery providing reserve power in case of a power interruption (Heald et al., Abstract and col. 7 lines 8-16).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a battery providing reserve power to Hadfield et al.'s system including secured assets and security hardware as taught by Heald et al. One of ordinary skill in the art would have been motivated to perform such a modification in order to avoid loss of data and damage of secure assets and hardware (Heald et al., col.1 lines 49-52).

20. Claims 24 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hadfield et al. (Lee Hadfield, Dave Hatter, Dave Bixler, "Windows NT Server 4 security handbook", 1997, ISBN: 078971213-x.) in view of Vogt et al. (U.S. Patent No.6775776).

21. Hadfield et al. teach a system as discussed above.

Hadfield et al. do not explicitly teach a monotonic counter, and permitting access to secured assets includes requesting a value stored in the monotonic counter and receiving the value stored in the monotonic counter (col. 7 line 66- col. 8 line 2).

Vogt et al. teach a monotonic counter (Vogt et al., col. 7 line 56-col. 8 line 7) and implicitly teach permitting access to secured assets includes requesting a value

stored in the monotonic counter and receiving the value stored in the monotonic counter.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use a monotonic counter wherein permitting access to secured assets includes requesting a value stored in the monotonic counter and receiving the value stored in the monotonic counter as taught by Vogt et al. One of ordinary skill in the art would have been motivated to perform such a modification in order to prevent a communication from being recorded and later played back to simulate a legitimate communication (Vogt et al., col. 7 lines 64-66).

22. Claims 23 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hadfield et al. (Lee Hadfield, Dave Hatter, Dave Bixler, "Windows NT Server 4 security handbook", 1997, ISBN: 078971213-x.) in view of Anderson, Jr. (U.S. Patent No.5805674).

23. Hadfield et al. teach a system as discussed above.

Hadfield et al. do not teach the secure asset including a random number generator where permitting access to the secured assets includes requesting and receiving a random number from the random number generator.

Anderson, Jr. teach a random number generator facilitating the random selection of the security phrases which read on requesting and receiving a random number from the random number generator (Anderson, Jr., col. 7 lines 55-60).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a random number generator as secure assets to the Hadfield et

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al.'s system in such a way that permitting access to the secured assets would include requesting and receiving the random number as taught by Anderson, Jr. One of ordinary skill in the art would have been motivated to perform such a modification in order to increase security (Anderson, Jr., col. 7 line 55-60).

24. Claims 2 and 14, 22 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hadfield et al. (Lee Hadfield, Dave Hatter, Dave Bixler, "Windows NT Server 4 security handbook", 1997, ISBN: 078971213-x.) in view of Aaro et al. (U.S. Patent No. 6662020) and in view of Official Notice.

25. Hadfield et al. teach inbox mailbox RAM storing input data for the one or more secured assets and an outbox mailbox RAM storing output data from the one or more secured assets as discussed above.

Hadfield et al. do not teach access filters configured to provide input data or access request to the inbox of the mailbox RAM if the processor is operating in the secure operating mode wherein the access filters are further configured not to provide input data to the inbox of the mailbox RAM if the processor is not operating in the secure operating mode, and wherein the access filters are further configured to provide a predetermined response in lieu of data upon receipt of said access request if the processor is not operating in the secure operating mode.

Aaro et al. teach a device including a secure memory for storing data directly coupled to the display in the secure mode of operation. The hardwired connections to secure memory in the secure mode ensures that data shown on the display is indeed the data that is processed and signed off in the secure mode of operation

(Abstract). The secure memory 1 is accessed only by the cryptographic module and the CPU, display and possibly the keypad, or rather its buffer, in the secure mode of operation. In the normal mobile phone mode of operation, access to this secure memory is impossible (col. 4 lines 55-61). The above reads on providing input data or access request to the inbox of the mailbox RAM if the processor is operating in the secure operating mode wherein the access filters are further configured not to provide input data to the inbox of the mailbox RAM if the processor is not operating in the secure operating mode. The use of access filters configured appropriately so that task can be accomplished is implicit.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to access filters configured to provide input data or access request to the inbox of the mailbox RAM if the processor is operating in the secure operating mode wherein the access filters are further configured not to provide input data to the inbox of the mailbox RAM if the processor is not operating in the secure operating mode as taught by Aaro et al. One of ordinary skill in the art would have been motivated to perform such a modification in order to prevent malicious programs such as viruses, to gain access to secure memory affecting secure assets (Aaro et al. col. 2 lines 25-37).

26. Official Notice is taken that it is old and well-known in the art to provide a predetermined response in lieu of data upon receipt of an access request to restricted assets.

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It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to provide a predetermined response in lieu of data upon receipt of an access request to restricted assets. One of ordinary skill in the art would have been motivated to perform such a modification in order to be alerted to an invalid request.

27. Claims 3-10, 25-29, 36 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hadfield et al. (Lee Hadfield, Dave Hatter, Dave Bixler, "Windows NT Server 4 security handbook", 1997, ISBN: 078971213-x) in view of Angelo et al. (U.S. Patent No. 6581162).

28. Hadfield et al. teach a system including a secure operating mode as discussed above.

29. As per claims 3-4 and 25-27 Hadfield et al. do not explicitly teach the secure operating mode that comprises a system management mode and an initiation register, wherein an entry in the initiation register is an indication to change the operating mode of the processor to the secure mode.

30. Angelo et al. teach a system management mode (SMM) which is entered upon receipt of a system management interrupt (SMI). Angelo et al. also teach SMI asserted by either an SMI timer or by a system request upon which the entire CPI state is saved in the SMM memory. After the initial processor state is saved, the processor begins executing an SMI handler routine providing security services (col. 7 line 43- col. 8 line 4).

The above reads on receiving a request to change the computer system from the first operating mode to the secure operating mode, providing an entry into an

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initiation register and asserting the control signal indicative of the entry providing a system management interrupt.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to utilize a secure operating mode that comprises a system management mode and an initiation register, wherein an entry in the initiation register is an indication to change the operating mode of the processor to the secure mode as taught by Angelo et al. One of ordinary skill in the art would have been motivated to perform such a modification so that secure assets are not accessible during normal computer operations.

31. As per claims 5, 7-9, 28, 36 and 47 Hadfield et al. do not explicitly teach a kick-out timer configured to provide an indication to the processor of when the processor is to exit the secure mode.

32. Angelo et al. teach timers (col. 4 line 58). When the computer system detects a request for secure communications or any event requiring secure entry of encryption information, control then proceeds to the step where appropriate registers in a processor are loaded prior to execution of the SMI code (Fig. 5, col. 9 lines 3-13). The computer systems don't wait indefinitely for input of time sensitive information like passwords. A timer measuring a time period in which the computer system is in the secure operating mode, and providing a control signal to exit the secure mode in response to the time period in which the computer system is in the secure operating mode exceeding a predetermined length of time are used to complete indefinite sessions.

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It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement a kick-out timer configured to provide an indication to the processor of when the processor is to exit the secure mode. One of ordinary skill in the art would have been motivated to perform such a modification in order to increase system security without exposing the system indefinitely when no action is performed.

33. As per claims 6, 10, 29 and 48 Hadfield et al. in view of Angelo et al. do not teach a kick-out timer configured to provide an indication to the processor of when the processor is to exit the secure mode into a standard mode.

Official Notice is taken that it is old and well-known practice in the art to implement a kick-out timer configured to provide an indication to the processor of when the processor is to exit the secure mode into a standard mode. One of ordinary skill in the art at the time of applicant's invention would be motivated to occasionally validate the user (e.g. by requesting a password) to minimize possibilities where the system could be compromised.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within


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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571)272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571)272-3838. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


5/27/08


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